## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

## Listing of Claims

(Currently amended) A method in a computer system for generating an output
including information regarding the likelihood a person has a gene variant indicative of an
atypical eventpreventing atypical clinical events related to information identified by DNA testing
a-person, comprising the steps of:

receiving clinical agent information, the clinical agent information including an identifier of the agent;

accessing a data structure to determine if a gene variant is known to be associated with one or more atvoical events for the clinical agent information:

inquiring if the person has a stored genetic test result value for the gene variant:

accessing hereditary information for the person if the person does not have a genetic test result value for the genetic variant;

utilizing the hereditary information for the person to determine the likelihood the person has the gene variant; and

generating an output including information regarding the likelihood that the person has the gene variant indicative of an atypical event based on the hereditary information.

## 2. (Canceled)

 (Currently amended) The method of claim 1, wherein the hereditary information includes ethnicity.

## 4. (Canceled)

- 5. (Previously presented) The method of claim 1, wherein the accessing of the hereditary information comprises accessing the hereditary information from an electronic medical record of the person stored within a comprehensive healthcare system.
- 6. (Previously presented) The method of claim 1, further comprising the step of initiating a clinical action if a test result value is not available for the person and the information regarding the risks indicates a significant risk that the person has the gene variant associated with an atypical event.
- (Original) The method of claim 6, wherein the clinical action is ordering a genetic test.
- 8. (Currently amended) A computer system embodied on one or more computer storage media having computer-executable instructions embodied thereon for generating an output including information regarding the likelihood that the person has the gene variant indicative of an atypical event based on the hereditary information preventing atypical clinical events related to information identified by DNA testing a person, comprising:
  - a receiving component that receives clinical agent information, the clinical agent information including an identifier of the agent;

a first accessing component for accessing a data structure to determine if a gene variant is known to be associated with one or more atypical events for the

clinical agent information;

an inquiring component that inquires if the person has a stored genetic test result value for the gene variant:

a second accessing component for accessing hereditary information for the person if the person does not have a genetic test result value for the gene variant;

a utilizing component for utilizing the hereditary information for the

person to determine the likelihood the person has the gene variant; and

a generating component that generates an output including information regarding the likelihood that the person has the gene variant indicative of an

9. (Canceled)

 (Previously presented) The computer system of claim 8, wherein the hereditary information includes ethnicity.

atypical event based on the hereditary information,

11. (Canceled)

12. (Previously presented) The computer system of claim 8, wherein the second accessing component accesses the hereditary information from an electronic medical record of the person stored within a comprehensive healthcare system.

13. (Previously presented) The computer system of claim 8, further comprising an initiating component that initiates a clinical action if a test result value is not available for the person and the information regarding the risks indicates a significant risk that the person has the gene variant associated with an atypical event.

 (Original) The computer system of claim 13, wherein the clinical action is ordering a genetic test.

15. (Currently amended) A computer-readable medium containing instructions for a method for controlling a computer system for generating an output including information regarding the likelihood that the person has the gene variant indicative of an atypical event based on the hereditary information preventing atypical clinical events related to information identified by DNA testing a person, the method comprising the steps of:

receiving clinical agent information, the clinical agent information including an identifier of the agent;

accessing a data structure to determine if a gene variant is known to be associated with one or more atypical events for the clinical agent information;

inquiring if the person has a stored genetic test result value for the gene variant:

accessing hereditary information for the person if the person does not have a genetic test result value for the gene variant;

utilizing the hereditary information for the person to determine the likelihood the person has the gene variant; and generating an output including information regarding the likelihood that the person has the gene variant indicative of an atypical event based upon the hereditary information.

16, (Canceled)

17. (Previously presented) The computer-readable medium of claim 15, wherein the hereditary information includes ethnicity.

18. (Canceled)

19. (Previously presented) The computer-readable medium of claim 15, wherein the accessing of the hereditary information comprises accessing the hereditary information from an electronic medical record of the person stored within a comprehensive healthcare system.

20. (Previously presented) The computer-readable medium of claim 15, further comprising the step of initiating a clinical action if a test result value is not available for the person and the information regarding the risks indicates a significant risk that the person has the gene variant associated with an atypical event.

21. (Original) The computer-readable medium of claim 20, wherein the clinical action is ordering a genetic test.